| Work Order September-27-13 12 | | | | *107 | 7557* | | | | | | Page 1 |
|--------------------------------------|----------------|--------------------------|------------------------|----------------------|-----------------------------|--------|--------------|---------------|---|------------------|----------------|
| Revision ID: Item Name: Bac | | Qty: 1.00 d Qty: 1.00 | *1* *1* | Accept | *N900 Cust Item Customer: | ID: | 100 |)* s | Setup Star Stop | 1.7 | S1* S2* |
| Approvals: Pi | rocess Plan: | 117 | Date: <u> 3-89-30</u> | Tooling: SPC (Y/N): | | eate: | | R | Run Star Stop | . "[7] | R1* R2* |
| Sequence ID/ Work Center ID | Opera Descr | ation iption | | Set Up/ Run Hours | Tool ID | Tool # | Plan Code | Accept Qty | Reject Qty | Reject Number | Insp. Stamp |
| Draw Nbr | Revision N | br | | | | | | | *************************************** | • | |
| D3023 | Rev A | | | | | | | | | | |
| *100* | FLOW | WATER JET | | 0.00 | | | | 1 | رج (| | Ae |
| Waterjet FLOW CNC Waterjet 3 2004-03 | <i>Э</i> " | Dwg Rev: Prog Rev: | | 0.00 | | | | | | | 13:12:1 |

Ae 13.12.11

0.00

0.00

110

110

Quality Control

QC2- Inspect parts off machine FAI/FAIB

Memo

DQA: Date: **WORK ORDER NON-CONFORMANCE / UPDATE** NCR: Yes / No QA Closed: Date: **AGAINST DEPARTMENT/PROCESS DISPOSITION** Work Order: Skid-tube Crosstube Water Jet Engineering Rework Part No. Machining Small Fab Prod. Eng. Coor. Quality Scrap Use-as-is Thermoforming Finishing Rec/Store/Packaging Other NCR No. Composite Work Order Update Large Fab Supplier Description of work order update Initial Action Sign & Root or Non-conformance Step Qty Chief Eng Description Date Verification **QC Inspector** Cause Date Doc/Data Equip/Tooling Operator Material Setup Other Process Supplier Training Unapproved **FAULT CATEGORY**

| Landi | ng (| Gear | General | | _ | _ | | | |
|-------|------|------------------------------|----------------|---|---------------------------------|---|----------------------|--------|--------------------|
| | | Bending | Bend | | Grain | | Ovalized | Г | Pressure/Forced |
| • | | Centre Not Concentric to O/S | BOM/Route | | Hardware | | Over/Under tolerance | | Temperature/Cure |
| | | Cracks | Broken/Damaged | | Inspection Incomplete | | Part Incorrect | \Box | Weld |
| | | Crushed/Crimped | Burrs | | Instructions Incomplete/Unclear | | Part Lost/Missing | | Wrong Stock Pulled |
| | | Cuffs | Contamination | Г | Maintenance | | Part Moved | | • |
| | | Heat Treat | Countersink | Г | Mislabeled | | Positioned Wrong | | |
| | | Inspection Strip in Tube | Cut Too Short | | Misread | | Power Loss/Surge | | Other |
| | | Ripples in Bend | Drill Holes | | Offset | | - | | |
| | | Torque Waves in Extrusion | Drawing | Ĺ | Out of Calibration | | | | |
| | | Turning Sequence | Finish | | Out of Sequence | | | | |
| | | Wave/Twist in Tube | Folio | | Outside Dimensions | | | | |

| Work Ordenseptember-27-1. | | · · | | *10 | 7557* | | | | | | Page 2 |
|--------------------------------|-------------|--------------------------|-----------------------|----------------------|------------------|------------|--------------|---------------|---------------|------------------|----------------|
| Item ID: Revision ID: | D3023-1 | | | Accept | *N900 | 040 | 100 |)* | Setup Star | 1 14 | S1* |
| Item Name: | Back Panel | | | | | | | | Stop | *N | S2* |
| Start Date: | 10/02/13 | Start Qty: 1.00 | *1 | k | Cust Item | ID: | | | | | |
| Required Date: | 10/02/13 | Req'd Qty: 1.00 | *1 | k | Customer: | | | | | | |
| Reference: | | | - | | | | | | | | |
| Approvals: | Process Pla | an: | Date: | Tooling: | D | ate: | _ | I | Run Star | 1/1 | R1* |
| | | | | SPC (Y/N): | D | ate: | | | Stop | , *N | R2* |
| Sequence ID/ Work Center II | D | Operation Description | | Set Up/ Run Hours | Tool ID | Tool # | Plan Code | Accept Qty | Reject Qty | Reject Number | Insp. Stamp |
| 120 | | QC8- Inspect parts - sec | ond check | 0.00 | | | | \sim 1 | | | |
| *120* QC Quality Control | | Memo | | 27 98-9 CII | 116 | | | | | <u> </u> | |
| 130 | | Form as per dwg | | 0.00 | | DAS | | | | | 13/13 |
| *130* Brake NC | | Memo | | 0.00 | | 30 9-89 | | | | | |
| Brake NC | | | | | | | | | | | |
| 140 | | QC5- Inspect part comp | leteness to step on W | | AS 27 1-89 | | | ١ | | | |

Memo

140

Quality Control

DQA: Date: **WORK ORDER NON-CONFORMANCE / UPDATE** NCR: Yes / No QA Closed: Date: **AGAINST DEPARTMENT/PROCESS** DISPOSITION Work Order: Engineering Skid-tube Water Jet Rework Crosstube Machining Prod. Eng. Coor. Quality Part No. Scrap Small Fab Thermoforming Rec/Store/Packaging Other Use-as-is Finishing Work Order Update Large Fab Composite Supplier NCR No. Description of work order update Initial Action Sign & Root Qty or Non-conformance **Chief Eng** Description Date Verification QC Inspector Date Step Cause Doc/Data Equip/Tooling Operator Material Setup Other Process Supplier Training Unapproved **FAULT CATEGORY Landing Gear** General Ovalized Bend Grain Pressure/Forced Bending BOM/Route Over/Under tolerance Centre Not Concentric to O/S Hardware Temperature/Cure Broken/Damaged Cracks Inspection Incomplete Part Incorrect Weld Crushed/Crimped Burrs Instructions Incomplete/Unclear Part Lost/Missing Wrong Stock Pulled Cuffs Maintenance Contamination Part Moved Heat Treat Countersink Mislabeled Positioned Wrong Other Inspection Strip in Tube Cut Too Short Misread Power Loss/Surge

Offset

Out of Calibration

Out of Sequence

Outside Dimensions

Turning Sequence

Wave/Twist in Tube

Ripples in Bend

Torque Waves in Extrusion

Drill Holes

Drawing

Finish

H:/FORMS/Quality Assurance\approved QA/NCRWO Rev G

| September-27-1. | | | | "1()/ | (55/" | | | | | | | Page | 3 |
|--------------------------------|------------|--------------------------|----------------------|----------------------|-------------|--------|--------------|---------------|-------|------------|------------------|----------------|-----|
| Item ID: Revision ID: | D3023-1 | | | Accept | *N900 | 040 | 100 |)* | Setup | Start | *N | S1* | |
| Item Name: | Back Panel | | | | | | | | | Stop | *N. | S2* | |
| Start Date: | 10/02/13 | Start Qty: 1.00 | *1* | | Cust Item I | D: | | | | | | | |
| Required Date: | 10/02/13 | Req'd Qty: 1.00 | *1* | | Customer: | | | | | | | | |
| Reference: | | | | | | | - | | Run | Start | | | |
| Approvals: | Process Pl | an: | Date: | Tooling: | Da | ate: | | | Kuli | | *N | R1* | |
| | QC: | | Date: | SPC (Y/N): | Da | ate: | | | | Stop | *N | R2* | |
| Sequence ID/ Work Center II | D | Operation Description | | Set Up/ Run Hours | Tool ID | Tool # | Plan Code | Accept Qty | t Re | • | Reject Number | Insp. Stamp | |
| *180* | | Identify as per dwg & St | ock Location: W/AUSI | 0.00 | | | | , | | D | 15-12 | -18 | |
| Packaging Packaging | | Memo | | 0.00 | | | | | | _a_ , | 1010 | <i>.</i> | - |
| 190 | | QC21- Final Inspection - | - Work Order Release | 0.00 | | | | <i>/</i> \ | | , | | | |
| *190* | | Memo | | 0.00 | | | | # | | <u>m</u> / | 13/12/ | 18. | |
| Quality Control | | | | | | | | 0, | | | -γγ (| 18. VF 12 | -18 |

| NCR: Y | es / No | ı | | | WORK ORDER NON-O | CON | FORM | MANCE / UPI | DATE | • | | |
|---------------|----------|-----------------|-----------|-------------|----------------------------|------|----------|-------------------|------------|--------------|---------------|--------------------|
| | · | | | | | | | | | QA Closed: | Date: | |
| Work Orde | | | · | | DISPOSITION | | | | AGAINST DE | PARTMENT | /PROCESS | |
| WOIK OIGE | ··· | | <u> </u> | | Rework | 1 | | Skid-tube | Crosstube | 1 | Water Jet | Engineering |
| Part N | lo. | | | | Scrap | 1 1 | 1 | Machining | Small Fab | Pro | d. Eng. Coor. | Quality |
| | | | | | Use-as-is | 1 | | noforming | Finishing | 4 | e/Packaging | Other |
| NCR N | lo | | | | Work Order Update |] | | Large Fab | Composite |] | Supplier | |
| Root | | | 1 | Descri | ption of work order update | lr | nitial | Act | tion | Sign & | | |
| Cause | Date | Step | Qty | | or Non-conformance | Chi | ief Eng | Descr | ription | Date | Verification | QC Inspector |
| Doc/Data | | | | | | | | -" | | | | · |
| Equip/Tooling | | | | ļ | | | | | | | | |
| Operator | | | | | | | | | | | 1 | |
| Material | | | | | | 1 | | | | : | | |
| Setup | | ļ | | | | | | | | | | |
| Other | | İ | | 1 | | | | | | | | |
| Process | | - | | | | | | | | | | |
| Supplier | | | | | | | | | | | | |
| Training | | j | | 1 | | | | | | | | |
| Unapproved | | | <u> </u> | | | | | | | | | <u> </u> |
| | | | | | | AUL' | T CATE | GORY | | | | |
| Landi | ng Gear | | | | General | _ | | | | 7 | | ٦ |
| | Bendir | g | | | Bend | Ш | Grain | | _ | Ovalized | Ļ | Pressure/Forced |
| | Centre | Not Conce | entric to | o/s | BOM/Route | Ш | Hardwa | ire | | Over/Under | | Temperature/Cure |
| | · Cracks | | | | Broken/Damaged | Ш | Inspect | ion Incomplete | | Part Incorre | ct | Weld |
| | Crushe | d/Crimped | | | Burrs | Ш | Instruct | tions Incomplete/ | Unclear | Part Lost/Mi | ssing | Wrong Stock Pulled |
| | Cuffs | | | | Contamination | Ш | Mainte | enance | | Part Moved | | |
| | Heat T | reat | | L | Countersink | Ш | Mislabe | eled | | Positioned V | Vrong | - |
| | Inspec | tion Strip ir | n Tube | | Cut Too Short | | Misrea | d | | Power Loss/ | Surge | Other |
| | Ripple | Ripples in Bend | | | Drill Holes | | Offset | | | | | |

Out of Calibration

Out of Sequence

Outside Dimensions

DQA:

Date:

Turning Sequence

Wave/Twist in Tube

Torque Waves in Extrusion

Drawing

Finish

H:/FORMS/Quality Assurance\approved QA/NCRWO Rev G

Page 1

Work Order ID:

107557

Parent Item:

D3023-1

Parent Item Name:

Back Panel

Start Date: 10/02/13

Required Date: 10/02/13

Start Qty: 1.00

Required Qty: 1.00

Comments:

IPP C02:01.23Revised NG

IPP Rev:D 08-04-16 now water jet DD verified by:EC

| Component Item ID/ Item Name | Replacement Item ID | Mfg/ Purch | Bin Item | Primary Location | Last Location | Route Seq ID | Unit of Measure | Qty on Hand | Qty per Kit | Total Qty | Qty Issued | Date Issued | Status |
|---|------------------------|---------------|-------------|---------------------|------------------|-----------------|--------------------|----------------|-------------|--------------|---------------|----------------|--------|
| M2024T3S.032 2024-T3 .032 sheet | | Purchased | No | | | 100 | sf | 533.9412 | 2.8777 | 3.0291579 | <i>J</i> | fe 1 | 3.12. |
| | | | | Location | | Loc Qty | Lo | c Code | | | | | |
| • | | | | MAT022 | | 533.9412 | | | | | | | |
| | | | | 1182 | 243 | 32.3562 | | | | | | | |
| | | | | 1185 | 523 | 141 | | | | | | | |
| | | | | 1213 | 309 | 64.656 | | | | | | | |
| | | | | 1230 |)96 | 27.6 | | | | | | | |
| | | | | 1235 | 574 | 81.9 | | | | | | | |
| | | | | 1249 | 987 | 186.429 | | | | | | | |

m127668 -> 3.1

| | | | | | | | | | | DQA: | Date | : |
|---------------------------|---------------------------|-------------|-----------|-------------------|----------------------------|-------------|-----------|---|------------|--------------|--|---------------------------|
| NCR: Y | es / N | 0 | | | WORK ORDER NON-C | O | NFOR! | MANCE / UP | DATE | OA Classel | | |
| | | | | | T | | | | | QA Closed: | Date |): |
| Work Orde | ar. | | | | DISPOSITION | | | | AGAINST DE | PARTMENT | /PROCESS | |
| | Part No. | | | | Rework Scrap Use-as-is Ti | | | Skid-tube Crosstube Small Fab Thermoforming Finishing | | 4 | Water Jet d. Eng. Coor. re/Packaging | Engineering Quality Other |
| NCR No. | | | | Work Order Update | | | Large Fab | Composite | Supplier | | | |
| Root | | | | Descri | ption of work order update | ı | nitial | Ac | tion | Sign & | | |
| Cause | Dat | e Step | Qty | , | or Non-conformance | Ch | ief Eng | Desc | ription | Date | Verification | QC Inspector |
| Doc/Data Equip/Tooling | | | | · | | | | | | | | |
| Operator | | | | | | | | | | | | |
| Material | | | | | • | | | | | | | |
| Setup | | 1 | | | | | | | | | | |
| Other | | | | | · | | | | | | | |
| Process | | | | | | | | | | | | |
| Supplier | | | İ | | | | | | | | | |
| Training | | | | | | | | | | | | |
| Unapproved | | • | | | | | , | | | | | |
| | | | | | F | AUL | T CATE | GORY | | | | |
| Landi | ng Gear | | | | General | _ | | | | , | - | _ |
| | Bend | ng | | | Bend | L | Grain | | | Ovalized | <u> </u> | Pressure/Forced |
| | Centr | e Not Cond | entric to | O/S | BOM/Route | | Hardwa | ire | | Over/Under | tolerance | Temperature/Cure |
| | Crack | S | | _ | Broken/Damaged | | Inspect | ion Incomplete | | Part Incorre | ct | Weld |
| | Crush | ed/Crimpe | đ | | Burrs | | instruct | tions Incomplete/ | 'Unclear | Part Lost/M | issing | Wrong Stock Pulled |
| | Cuffs | | | L | Contamination | | Mainte | enance | | Part Moved | | |
| | Heat | Treat | | | Countersink | | Mislabe | eled | | Positioned V | Vrong | - - |
| | inspe | ction Strip | in Tube | | Cut Too Short | | Misread | d | | Power Loss/ | Surge | Other |
| | Rippl | es in Bend | | | Drill Holes | | Offset | | | | | |
| | Torque Waves in Extrusion | | Drawing | | Out of | Calibration | | | | | | |

Out of Sequence

Outside Dimensions

Turning Sequence

Wave/Twist in Tube

Finish

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| DART AEROSPACE LTD | Work Order: | 107227 |
|------------------------------|--------------|-------------|
| Description: Back Panel | Part Number: | D3023-1 |
| Inspection Dwg: D3023 Rev: A | | Page 1 of 1 |

FIRST ARTICLE INSPECTION CHECKLIST

X First Article Prototype

| Drawing Dimension | Tolerance | Actual Dimension | Accept | Reject | Method of Inspection | Comments |
|----------------------|---------------|---------------------|--------|--------|-------------------------|----------|
| Ø0.128 | +0.005/-0.001 | 128 | _ | | V | JKM-05 |
| Ø0.191 | +0.005/-0.001 | 191 | - | | V | |
| 1.660 | +/-0.010 | 1,660 | _ | | V | |
| 0.375 | +/-0.010 | .375 | _ | | v | |
| 1.340 | +/-0.010 | 1.340 | | | V | |
| 2.375 | +/-0.010 | 2.375 | _ | | V | |
| 0.375 | +/-0.010 | ,375 | - | | V | |
| 25.28 | +/-0.030 | 25.28 | _ | | T | |
| 27.03 | +/-0.030 | 27.03 | | | T | |
| 28.10 | +/-0.030 | 28.10 | - | | T | |
| 1.30 | +/-0.030 | 1.30 | _ | | V | |
| 2.375 | +/-0.010 | 2.315 | _ | | V | |
| 8.711 | +/-0.010 | 8.711 | • | | Т | |
| 5.597 | +/-0.010 | 5,597 | _ | | Τ | |
| 8.57 | +/-0.030 | 8,57 | _ | | 7 | |
| 1.970 | +/-0.010 | 1,970 | - | | V | |
| 7.42 | +/-0.030 | 7.42 | _ | | 7 | |
| 10.92 | +/-0.030 | 10.90 | _ | | 7 | |
| 14.75 | +/-0.030 | 14.75 | _ | | T | |
| | | | | | | |
| | | | | | | |

| | | DAG | | |
|----------------|-------------|----------|---------------------|-----|
| Measured by: | Audited by: | 27 | Prototype Approval: | N/A |
| Date: 13.12.11 | Date: | 13 75 // | Date: | N/A |
| | | | | |

| Rev | Date | Change | Revised by | Approved |
|-----|----------|-----------|--|----------|
| Α | 08.11.27 | New Issue | KJ/EC | 7 |
| | | 1 100 | —————————————————————————————————————— | |

NCR: Yes / No

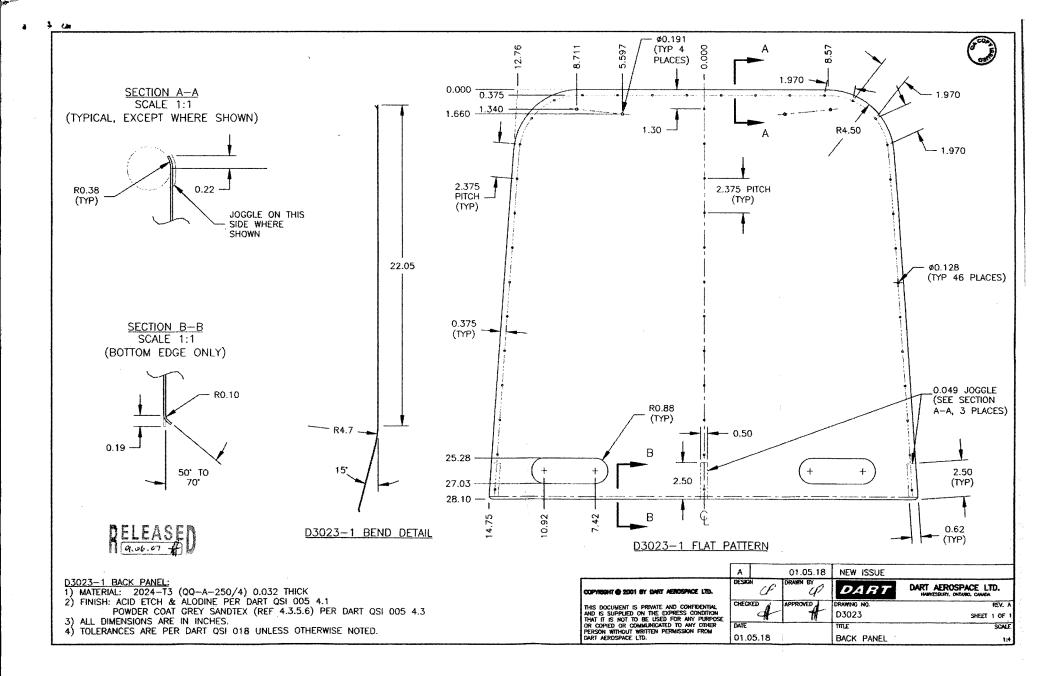
WORK ORDER NON-CONFORMANCE / UPDATE

| | | | | | | | | | | QA Closed: | Dat | e: | |
|--------------|------------------------------|----------|-----|---|--------------------------------|-------------|---|----------|----------|-------------------------------|---------------|---------------------|--|
| | ·: | | | | DISPOSITION | | AGAINST DEPARTMENT/PROCESS | | | | | | |
| Part No | | | | | Rework Scrap | | Skid-tube Crosstube Machining Small Fab | | | Water Jet Prod. Eng. Coor. | | Engineering Quality | |
| NCR No. | | | | | Use-as-is Work Order Update |] | Thermoforming Finish Large Fab Compos | | | | | | |
| Root | | Descript | | | ption of work order update | lni | Initial Action | | | Sign & | | | |
| Cause | Date | Step | Qty | (| or Non-conformance | Chie | f Eng | Desc | cription | Date | Verification | QC Inspector | |
| Doc/Data | | | | | | | | | | | | | |
| quip/Tooling | | | | | | .] | | | | | | | |
| Operator | | | | | | | ď | . | | | | | |
| Material | | į | | | | | | | | | | | |
| Setup | | ļ | | | | | | | | | | | |
| Other | | | | | | 1 | | | | | i | | |
| Process | | | | | | | | | | | | | |
| Supplier | _ | Ì | | | | | | | | | | | |
| Fraining | _ | | | | | | | | | | | | |
| Jnapproved | | | | | · | | | | | <u> </u> | | | |
| | | | | | F | AULT | CATE | GORY | | | | | |
| Landing | g Gear | | | | General | | | | | - | - | _ | |
| L | Bending | | | | Bend | Grain | | | | Ovalized | | Pressure/Forced | |
| | Centre Not Concentric to O/S | | | | BOM/Route | \vdash | lardwa | are | | Over/Under tolerance | | Temperature/Cure | |
| L | Cracks | | | | Broken/Damaged | | Inspection Incomplete | | | Part Incorre | - | Weld | |
| | Crushed/Crimped | | | | Burrs | | Instructions Incomplete/Unclear | | | Part Lost/M | issing [| Wrong Stock Pulled | |
| 1 | Cuffs | | | | Contamination | - | Maintenance | | | Part Moved | | | |
| | Heat Treat | | | | Countersink | \vdash | Mislabeled | | | Positioned V | | | |
| L | Inspection Strip in Tube | | | | Cut Too Short | - | Misread | | | Power Loss/ | 'Surge | Other | |
| Ĺ | Ripples ir | n Bend | | | Drill Holes | | Offset | | | | | | |
| | Torque Waves in Extrusion | | | | Drawing | | Out of Calibration | | | | ·· <u>···</u> | . <u> </u> | |
| ļ | Turning Sequence | | | | Finish | | Out of Sequence | | | | | | |

Outside Dimensions

Wave/Twist in Tube

H:/FORMS/Quality Assurance\approved QA/NCRWO Rev G



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| | | | | | | | | | | DQA: | Date: | |
|--|---------------|----------|--------------|--------|---|-----|----------------------------|-----------|-------------------------|---------------------------|--------------|--------------|
| NCR: Yes | / No | | | | WORK ORDER NON-CONFORMANCE / UPDATE | | | | | QA Closed: | Date: | |
| Work Order: | - | <u> </u> | | | DISPOSITION | | AGAINST DEPARTMENT/PROCESS | | | | | |
| Part No. | | | Rework Scrap | | Skid-tube Crosstube Machining Small Fab Thermoforming Finishing | | | | Water Jet d. Eng. Coor. | Engineering Quality Other | | |
| NCR No. | | | | | Use-as-is Work Order Update | | | Large Fab | Composite | Rec/Sto | Supplier | Other |
| Root | | | | Descri | ption of work order update | lr | nitial | Act | tion | Sign & | | |
| Cause | Date | Step | Qty | (| or Non-conformance | Chi | ief Eng | Desc | ription | Date | Verification | QC Inspector |
| Doc/Data Equip/Tooling Operator Material Setup | | | | | , | | | | · | | | |
| Other Process Supplier | | | | | | | | | , | | | |

| FAULT CATEGORY | | | | | | | | | | |
|--------------------------|-----------------------------------|----------------|---|---------------------------------|--|----------------------|---|--------------------|--|--|
| Landing Gear General | | | | | | _ | | _ | | |
| | Bending | Bend | | Grain | | Ovalized | | Pressure/Forced | | |
| | Centre Not Concentric to O/S | BOM/Route | | Hardware | | Over/Under tolerance | | Temperature/Cure | | |
| <u> </u> | Cracks | Broken/Damaged | | Inspection Incomplete | | Part Incorrect | | Weld | | |
| | Crushed/Crimped Burrs | | | Instructions Incomplete/Unclear | | Part Lost/Missing | | Wrong Stock Pulled | | |
| | Cuffs | Contamination | | Maintenance | | Part Moved | | | | |
| | Heat Treat | Countersink | | Mislabeled | | Positioned Wrong | | _ | | |
| | Inspection Strip in Tube | Cut Too Short | Γ | Misread | | Power Loss/Surge | | Other | | |
| | Ripples in Bend | Drill Holes | | Offset | | | | | | |
| | Torque Waves in Extrusion Drawing | | | Out of Calibration | | | | | | |
| | Turning Sequence Finish | | | Out of Sequence | | | • | | | |
| Wave/Twist in Tube Folio | | | | Outside Dimensions | | | | | | |

Training Unapproved